



November 26, 2007

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Standards Coordinator  
South Carolina Department of  
Health and Environmental Control-Bureau of Water  
2600 Bull Street  
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Subject: SC Water Quality Standards Triennial Review Process  
Proposed Amendments to R.61-68  
South Carolina Manufacturers Alliance (SCMA) Comments

The South Carolina Manufacturers Alliance (SCMA) appreciates the opportunity to participate in the Water Quality Standards triennial review process and to provide comments on specific water quality standards and other matters addressed in R. 61-68, Water Classifications and Standards. The SCMA has a membership that is comprised of over 200 companies, and represents a very diverse group of manufacturers with interests in South Carolina. SCMA offers the following comments:

## **I. GENERAL COMMENTS**

- SCMA supports SCDHEC's proposed change to R.61-68 C.10.(a) which provides for the use of mixing zones in source water protection areas.
- SCMA supports SC DHEC's decision to use the current arsenic Maximum Contaminant Level (MCL) as the interim value for the protection of human health until more definitive scientific research is evaluated.
- SCMA supports the removal of iron and manganese as non-priority pollutants from R.61-68.

## **II. ADOPTION OF EPA WATER QUALITY CRITERIA**

During previous correspondence, the SCMA requested that the Department review any new or revised EPA criteria to determine their applicability to South Carolina rather than simply adopting EPA's recommended water quality standards. This review should encompass all the EPA recommended water quality criteria for the protection of human health posted in the Federal Register on December 31, 2003. As demonstrated by the Department's modification of the arsenic criteria, there are many variables and assumptions that the EPA uses to calculate recommended water quality criteria, and many of those factors may not be applicable to South

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Carolina or are overly conservative. SCMA believes that certain standards are currently promulgated at levels more stringent than necessary to adequately protect human health and the indigenous biological community of the state's surface waters.

## **II. REVISION OF THE PROPOSED SOUTH CAROLINA WATER QUALITY STANDARD FOR THALLIUM**

With regard to the human health-based water quality standards for thallium in other EPA Region IV states, most are either the same as those currently in effect in South Carolina (W/O – 1.7 µg/L and Org. Only – 6.3 µg/L) or do not exist. SC DHEC is proposing to adopt the EPA recommended values of 0.24 µg/L (W/O) and 0.47 µg/L (Org. Only) which were posted in the Federal Register on December 31, 2003.

At present, there is a lack of rigorous and specific scientific study on the water effects of thallium. SCMA contends that the several of the values used in deriving the thallium standard are not directly applicable to South Carolina waters. Several factors are utilized in the development of water quality criteria, and their derivation is based on conservative estimates of the risk to human health. These risk factors include the Reference Dose (RfD), the Relative Source Contribution (RSC), the Fish Ingestion Rate (FIR), the Bioconcentration Factor (BCF), and others. Several of the values used for these factors are overly conservative and one factor that is inappropriate for South Carolina freshwaters is the BCF for thallium. Further review of each factor used to derive the proposed standards for their applicability in South Carolina is warranted. Therefore, SCMA requests that the current thallium water quality standard remain unchanged until more relevant state or regional scientific studies can be performed and properly evaluated.

## **III. RESTRICTION OF INSTREAM DILUTION**

SC Regulation 61-9, *Water Pollution Control Permits*, contains a requirement that SCMA believes should be addressed through R.61-68 and more clearly defined in the associated permitting procedures. Many rivers in South Carolina are listed as impaired water bodies for the consumption of fish tissue due to methyl mercury, even though the instream mercury concentration is not higher than the most restrictive stream standard. Whether the impairment is due to mercury, iron, or another parameter, SCMA does not agree that section 122.44(d)(1)(ii) of R.61-9 is applicable to restrict the use of dilution flow when evaluating the reasonable potential for the discharge to result in an exceedance of the stream standards. With regard to establishing limitations, standards, and other permit conditions, that part of R.61-9 states,

(d) Water quality standards and State requirements: Any requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards under sections 301, 304, 306, 307, and 318, and 405 of CWA necessary to:

(1) Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.

(ii) When determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and non-point sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity

testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.

Due to the cost associated with compliance with unnecessarily stringent NPDES permit limitations, SCMA recommends that Sections C.4.(a)(2) and C.4.(b)(2) of R.61-68 be modified as shown by highlighted text to clarify that the application of dilution flow should only be restricted when required by an associated TMDL. Since the language in R.61-9 does not specifically restrict dilution flow when deriving water quality-based permit limitations, SCMA believes that no modification of that regulation is necessary.

C.4.(a)(2) Except for impaired water bodies addressed within TMDLs, the Department shall consider conditions that are comparable to or more stringent than 7Q10 where appropriate to protect classified and existing uses, such as below dams and in tidal situations. Only those situations where the use of 7Q10 flows are determined to be impracticable, inappropriate, or insufficiently protective of aquatic life uses shall be considered as a situation in which the Department may consider other flow conditions.

C.4.(b)(2) Except for impaired water bodies addressed within TMDLs, the Department shall consider conditions that are comparable to or more stringent than annual average flow, 7Q10, or 30Q5 (if provided by the applicant) where appropriate to protect the classified and existing uses, such as below dams and in tidal situations. Only those situations where the use of annual average flow, or 7Q10, or 30Q5 (if provided by the applicant) are determined to be impracticable, inappropriate, or insufficiently protective of human health uses shall be considered as a situation in which the Department may consider other flow conditions.

Please contact Sara Hopper at 803-799-9695 with any questions regarding these comments.

Respectfully submitted,

*Sara Hopper*

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